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| 09/695,323 | 10/25/2000 | Shinya Kubo | 11-307563US | 1206 |

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EXAMINER

LEE, PATRICK J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,323

Applicant(s)

KUBO ET AL.

Examiner

Patrick J. Lee

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. This action is in response to After Final Amendment filed May 12th, 2003.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
3. The indicated allowability of claim 6 is withdrawn in view of the newly discovered reference(s) to Yamamoto et al 6,313,586. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2 & 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Nabeshima et al 6,330,083.

With regards to claims 1 & 7, Nabeshima et al disclose a scanning device comprising of a cold cathode tube lamp (215), CCD (204) as a photoelectric conversion element, a temperature sensor (218A), a CPU (28) as a control circuit, and a lighting control inverter (216). Temperature sensor (218A) detects an ambient temperature of the wall of the cold cathode tube lamp (215) and sends information of the temperature

to CPU (28). Temperature sensor (218A) also sends temperature information to temperature control circuit (218B) to control the heater (217). CPU (28), during the warmup process of the device, receives the detected ambient temperature (S1108), and controls a drive signal on the basis to set the lighting control value (S1112). While this control occurs during the warmup process of the device, it is still a step in the main routine of reading an image from the document as illustrated in figure 10.

With regards to claims 2 & 8, a lighting control inverter (216) serves as a means for adjusting the current applied to cold cathode tube lamp (215).

6. Claims 1-2 & 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto et al 6,313,586.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claims 1-2 & 7-8, Yamamoto et al disclose an image scanning device in which light from a cold-cathode tube light source (CCFL) (11) illuminates a document, which reflects light back into a solid imaging device (CCD) (12). The device also comprises a temperature sensor (17), inverter control circuit (16, 18), inverter (14), and a power source (13). Power source (13) and inverter (14) are responsible for applying a tube current into CCFL (11), while inverter control circuit (16, 18) controls the

Art Unit: 2878

current applied to the CCFL (see column 3, lines 26-30 & 43-56) when the illumination of the document starts in order read the document. A temperature sensor (17) is disposed to detect an environmental temperature as an ambient temperature of the CCFL (11) and send the value to inverter control circuit (18). Inverter control circuit (18) is supplied with a table of tube current correction values in order to account for changes in environmental temperature, and in conjunction with the inverter (14), a corrected tube current is sent to CCFL (11). See column 4, lines 29-46.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3-5 & 9-11 are rejected under 35 U.S.C. 103(a) as being obvious over Nabeshima et al 6,330,083.

With respect to claims 3-5 & 9-11, Nabeshima et al disclose the system as described in the discussion of claim 1. While Nabeshima et al do not explicitly disclose the inverter control circuit controlling the illumination of the cold-cathode tube light source via the voltage, applied time, or frequency of the drive signal, such is known and would have been obvious to one of ordinary skill in the art as being an effective way of changing the level of illumination by the cold-cathode tube light source.

10. Claims 3-5 & 9-11 are rejected under 35 U.S.C. 103(a) as being obvious over Yamamoto et al 6,313,586.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned

by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With respect to claims 3-5 & 9-11, Yamamoto et al disclose the system as described in the discussion of claim 1. While Yamamoto et al do not explicitly disclose the inverter control circuit controlling the illumination of the cold-cathode tube light source via the voltage, applied time, or frequency of the drive signal, such is known and would have been obvious to one of ordinary skill in the art as being an effective way of changing the level of illumination by the cold-cathode tube light source.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being obvious over Yamamoto et al 6,313,586 in view of Williams 6,127,785.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29,

1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With respect to claim 6, Yamamoto et al disclose a system as described in the discussion of claim 1. The system comprises of a cold-cathode tube light source (CCFL) (11), a solid imaging device (CCD) (12), a power source (13), an inverter (14), and an inverter control circuit (16). However, Yamamoto et al does not disclose an impedance detection circuit. Such is known and taught by Williams.

Williams teaches a power supply and control circuit for driving a fluorescent lamp. The system comprises of a fluorescent lamp (15), an inverter (20), a power source (35), a regulator circuit (25), a resistor (34), and a current feedback circuit (30). Fluorescent lamp (15) is disclosed to possibly be a cold-cathode tube lamp (see column 4, lines 30-33). Similar to the system taught by Yamamoto et al, the inverter (20) and power source (35) are responsible for providing power to fluorescent lamp (15) as stated in column 5, lines 11-15. Current feedback circuit (30) is capable of sensing a value of impedance between terminal (32) and the ground (see column 4, lines 65-67) in order to produce a feedback signal indicative of the current of fluorescent lamp (15). Current feedback circuit (30) then produces a feedback signal FB to the regulator circuit (25) as a control circuit, which then controls and modulates the output of the inverter (20) (see column 5, lines 15-25). To modify the teachings of Yamamoto et al with those of Williams would have been obvious in order to allow the lamp to maintain a constant

Art Unit: 2878

intensity and tube current even though the lamp impedance may change due to aging of the device (see column 5, lines 29-38).

Response to Arguments

12. With regards to the argument stated for claims 1 & 7, Nabeshima et al disclose the temperature detection data being sent to the CPU (28) from temperature sensor (218A) during step (S1108) in order to set an illumination level (S1112). While it is noted that the temperature is received during the warmup process of the device, the step (S1108) is still necessary in order for the document to be read as illustrated by figure 10. Drive signal is applied to the lamp (215) by lighting control inverter (216) after steps (S1108 and S1112) take place.

As discussed before, the term "ambient temperature" is open to various interpretations. While Nabeshima et al teach that the wall temperature of the cold cathode tube light source is detected by the temperature sensor (218A), the wall temperature still qualifies as an ambient temperature, for it refers to the environmental temperature of the wall (see column 6, lines 20-22).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Akimoto et al 6,531,830 teach a discharge lamp with a control circuit to adjust the light intensity based on detected impedance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (703) 305-

Art Unit: 2878

3871. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9558 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

PJL

May 27, 2003

Patrick J. Lee
Examiner
Art Unit 2878


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